

RCF status

Back to last week HPSS failure

Eric Lançon 5/16/2017

70 YEARS OF
DISCOVERY

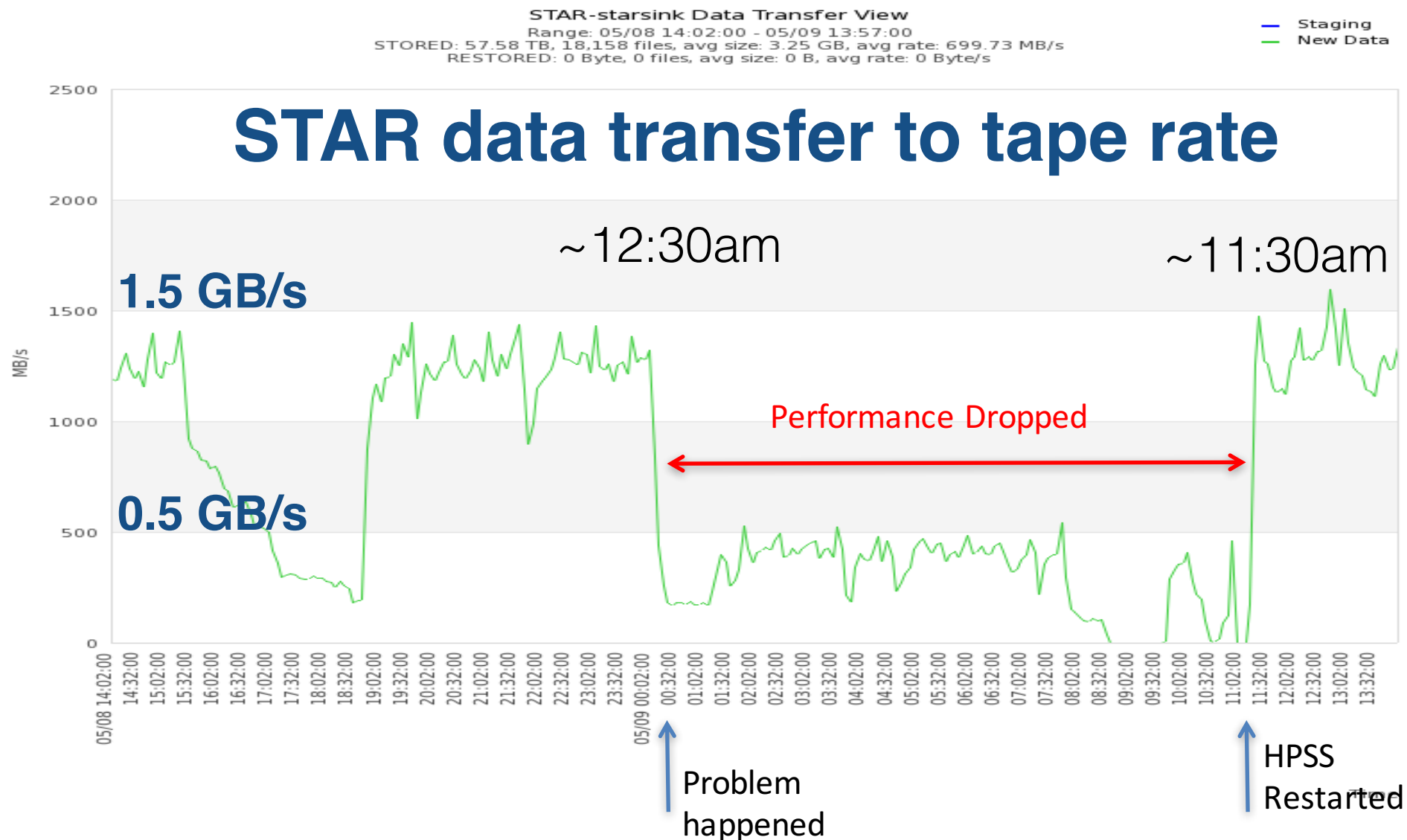
A CENTURY OF SERVICE



Data volume archived since beg. of run

4.11 PB

HPSS problem on 5/9



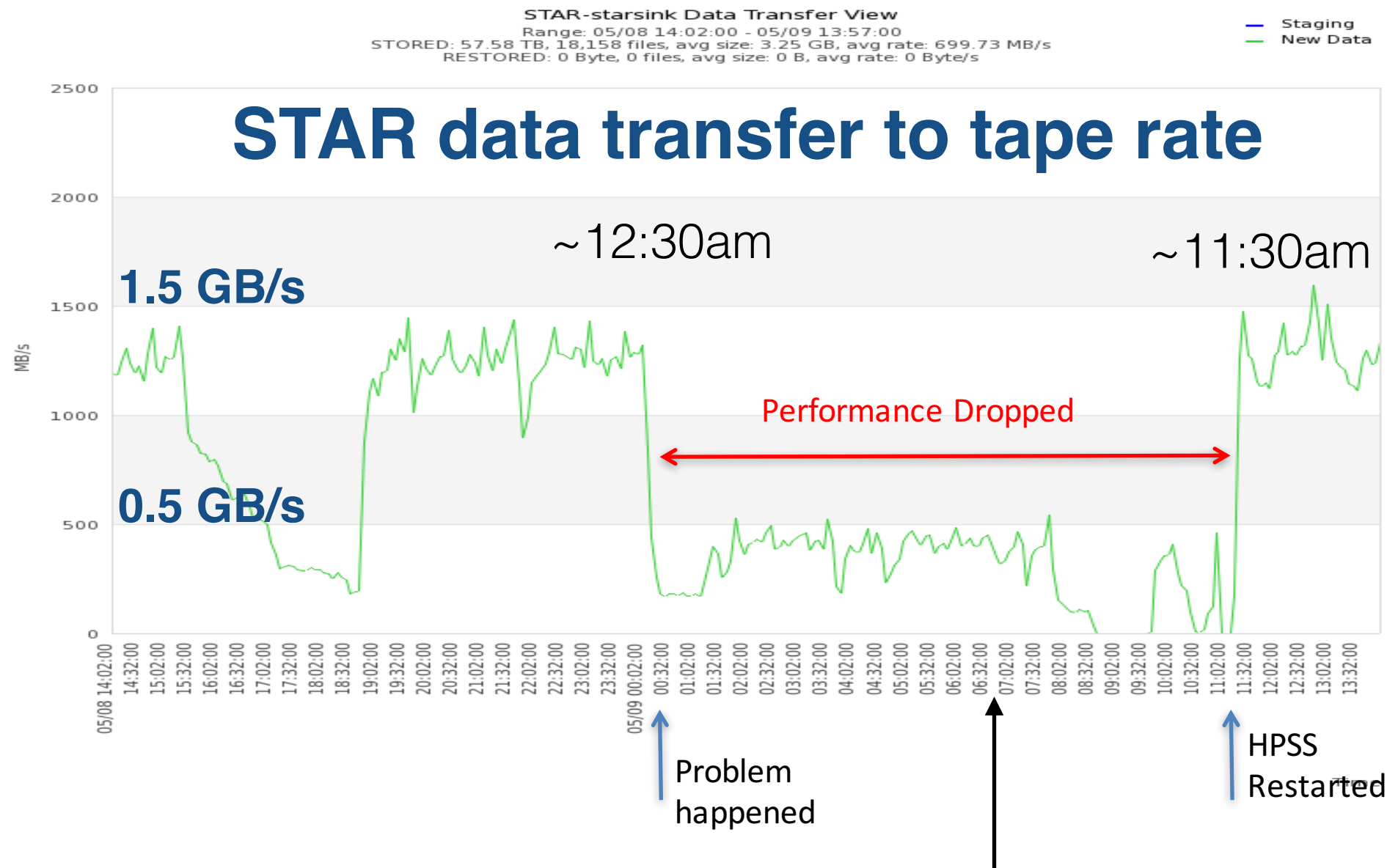
‘HPSS busy, too many threads’ error messages

Many read errors observed

At the same time:

- One disk went offline -> brought online manually
- One ATLAS tape drive in error -> tape drive locked

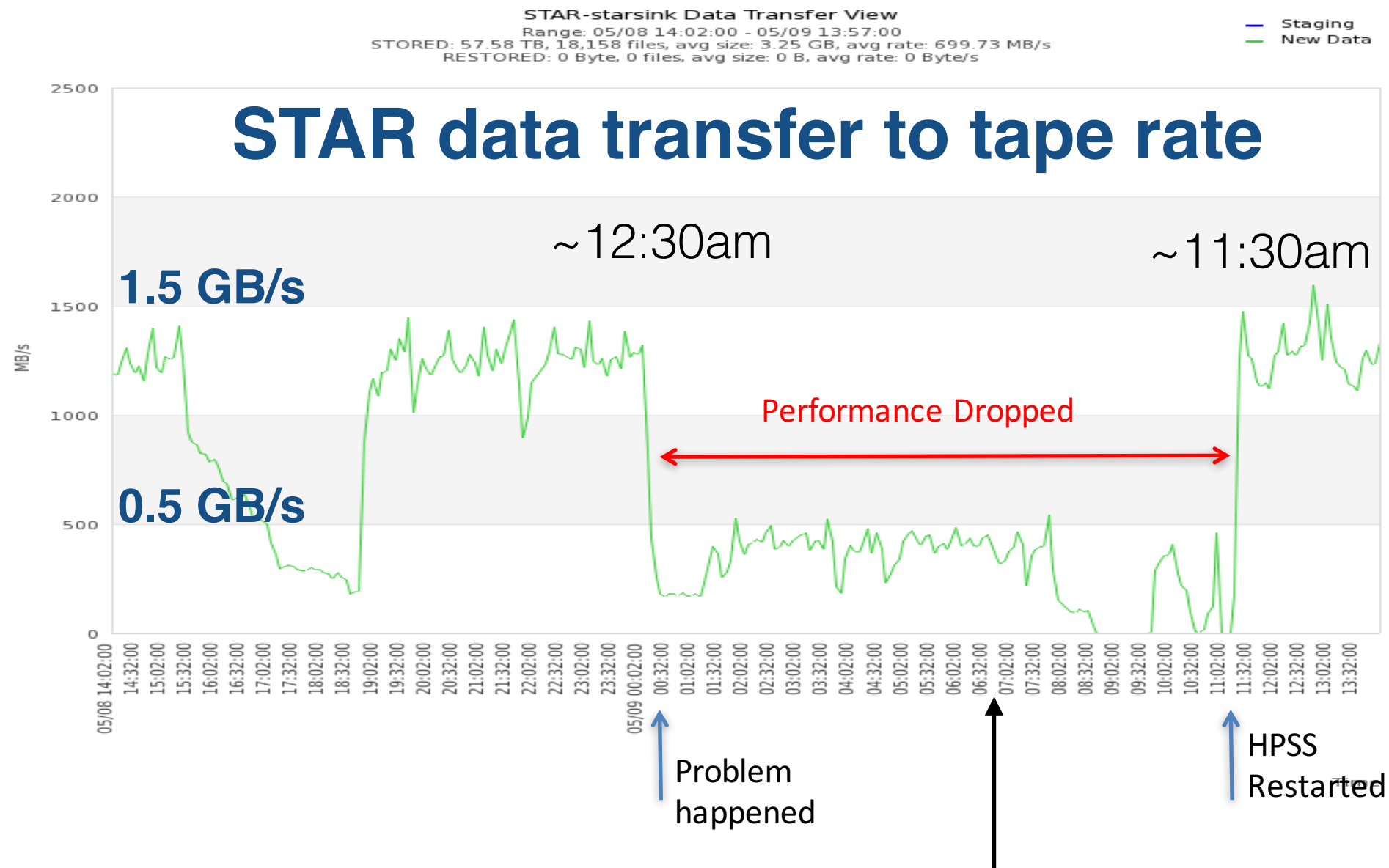
HPSS problem on 5/9



at ~6:30 again 'HPSS busy, too many threads' error message
several operations tried (stopping staging,...)

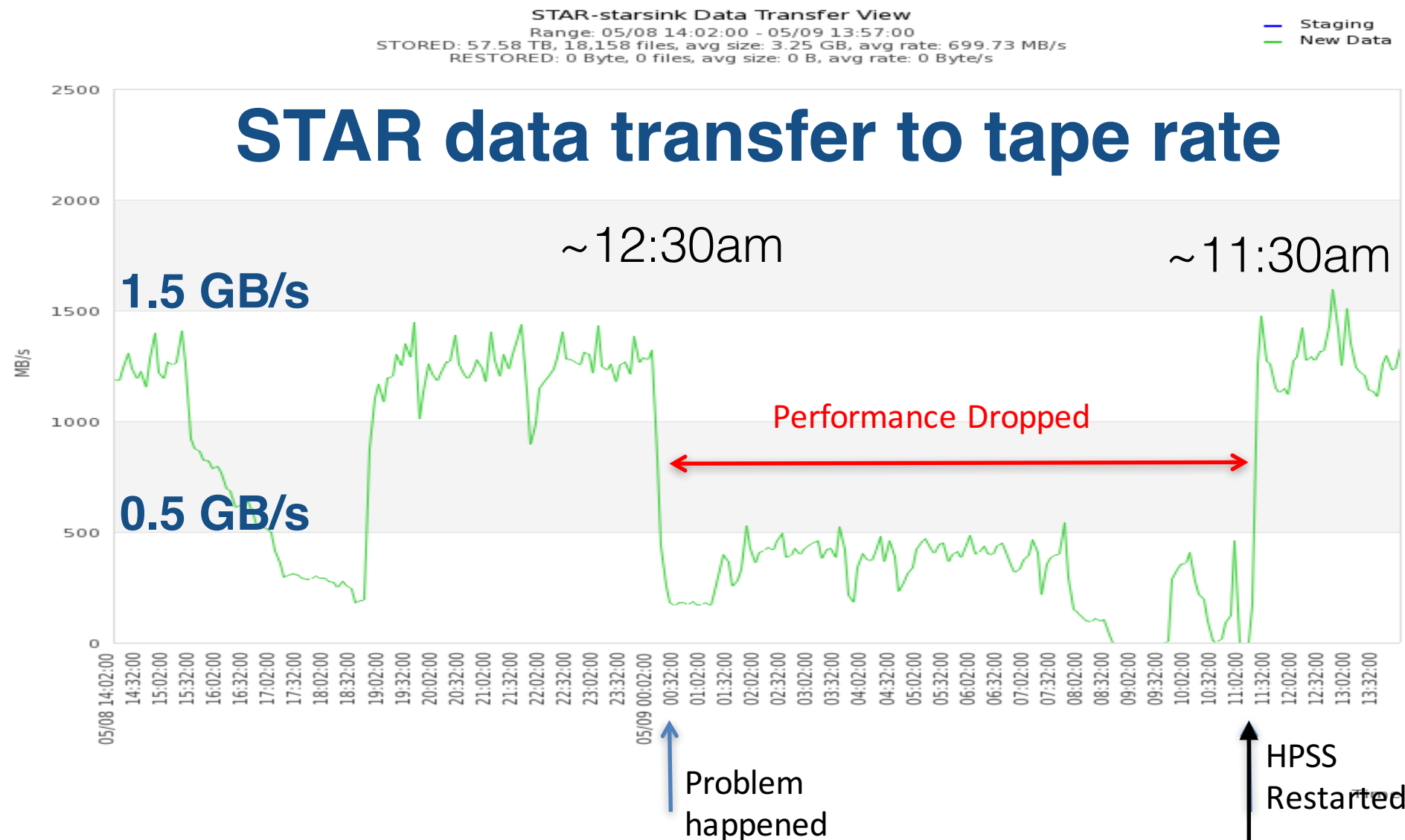
at ~8:30 decided to reboot HPSS and new requests were blocked

HPSS problem on 5/9



Record type=ALARM, Event time=2017/05/09 00:02:29 EDT, Severity=MAJOR
Subsystem=CORE, Message#=3057, Error code=-1
Desc name=Core Server (Subsystem 1), Routine=ss_WriteTapeThread (line 1879)
PID=39310, Node=core.rcf.bnl.gov, User=
Type=**SOFTWARE_ERROR**, Object Class=40, Request Id=2557455989
Error creating/connecting socket, details: hpss_net.c:231:hpss_net_accept(): Error returned from accept. 24 **Too many open files**: Not owner

HPSS problem on 5/9



at ~11:15 HPSS was restarted
performances back to normal

No DATA were lost during that period

After event...

- **Observation : unusual high level of concurrent activities during before and during critical period**
 - **STAR** : RAW write (live data) ~1.5 GB/s, DST stagein ~1 GB/s / write ~0.4 GB/s, RAW stagein ~0.3 GB/s
 - **PHENIX** : RAW stagein ~1.6 GB/s, DST write ~0.5 GB/s
 - **ATLAS** : RAW stagein ~1.5 GB/s
- **No problem observed after reboot of HPSS**, but external conditions changed meanwhile
- IBM contacted
 - **Diagnostic : System configuration reached (sic): too many requests at same time**
 - **IBM proposed an update of system configuration** based on past events (with margin included)
 - We asked for clear warning/alert to be sent to system administrator when HPSS is close to reach its configuration's limit (a Change Request (CR) already requested by another site : *"HPSS should give the administrator warning before hitting configurable limits of the system."*...)
- **New HPSS configuration installed on 5/11**
 - We implemented our own monitoring of Nb of requests vs configuration...